contacts at a later stage, if desired. In some embodiments, the protective layer may be patterned lithographically. For example, a resist may be spin coated or otherwise deposited, exposed and developed the resist, used as an etch mask for an etch, and then stripped or otherwise removed.

[0051] FIG. **3**E shows an embodiment of a workpiece object **310**E having an embodiment of an anchor **354** coupled between the group III-V device **316**E and a left structure **342**L. The left structure represents an example of an adjacent or nearby fixed structure. The anchor may help to anchor the group III-V device to the left structure. The anchor may represent a structure or material that is operable, after the etch of the graded composition release layer (which will be discussed further below), to anchor or hold the group III-V device in a fixed position, restrict the motion of the group III-V device, stabilize the position of the group III-V device, prevent the group III-V device from sliding, falling, or tilting, or the like. One example of a suitable anchor is a portion of material operable to serve as a tether to fasten, tether, or otherwise couple the group III-V device to an adjacent fixed structure (e.g., the left structure).

[0052] As shown in the illustrated embodiment, one suitable embodiment of the anchor is a lithographically patterned photoresist anchor **354**. The patterned photoresist anchor may represent a lithographically patterned portion of photoresist that may be formed by spin coating or otherwise depositing a photoresist layer over the top surface of the workpiece object, optionally baking the photoresist layer, and photo-lithographically patterning and developing the photoresist layer to leave a portion of the photoresist corresponding in size and position to the anchor, while removing other portions of the photoresist layer around the anchor. The photoresist anchor may represent a portion of the photoresist disposed or coupled with both the group III-V device and the adjacent fixed left structure. It is noted that the photoresist need not actually be disposed over the upper and lower electrical contacts (see for example FIG. **3**F).

[0053] Another suitable embodiment of an anchor is an optional bridge **356** or other portion of the patterned protective layer **352**. The bridge may represent a portion of the patterned protective layer allowed to remain over the top surface of the graded composition release layer coupled with both an adjacent or nearby fixed structure (e.g., the left structure) and the group III-V device. Such a bridge may also help to anchor or tether the group III-V device to the fixed structure. It is generally not necessary to include both the bridge of the patterned protective layer as well as the photoresist anchor.

[0054] In still other embodiments, other types of materials may be formed, or allowed to remain, coupled between the group III-V device and a nearby or adjacent fixed structure in order to serve as an anchor. For example, a bridge of one of the III-V compound semiconductor device layers **330** (see e.g., FIG. **3**A) may be allowed to remain as an anchor. As another example, another piece or portion of material besides resist may be coupled between the group III-V device and a nearby or adjacent fixed structure.

[0055] FIG. **3**F is a top planar view of an embodiment of a workpiece object **310**F having multiple anchors **354** disposed around a group III-V compound semiconductor device **316**F. In the illustration, the group III-V device has a generally hexagonal shape, although this is not required. Other shapes are also suitable, such as, for example, other polygons (e.g., squares, rectangles, pentagons, triangles, and the like), circles, ovals, irregular shapes, etc. In this top planar view, the protective layer **352** over the group III-V device **316**F is visible. Also, in this top planar view, the protective layer **352** on top of the adjacent fixed structure **342** surrounding the group III-V device is visible. Between the group III-V device and the adjacent fixed structure are generally hexagonally annular shaped release layer access openings **358**. At the bottoms of the release layer access openings, is an exposed surface of the graded composition release layer **348**. An etch of the graded composition release layer may be performed through the release layer access openings. In the illustrated embodiment, six approximately evenly spaced anchors are disposed around the circumference of the group III-V device, although in other embodiments fewer (e.g., a single) or more anchors may optionally be used. Also, the anchors need not surround the device. In some embodiments, the anchors may represent patterned photoresist anchors. Alternatively, other types of anchors may be used (e.g., a bridge of an etch stop layer). As readily seen in this view, in some embodiments, the anchors may optionally be formed at positions so that they do not cover the electrical contacts, which may make the electrical contacts available for contact with a receiving substrate, as will be discussed further below.

[0056] FIG. **3**G shows an embodiment of a workpiece object **310**G formed by performing an etch **318** on the graded composition release layer **314** of the workpiece object of **310**E of FIG. **3**E. Performing the etch may include introducing an etchant through the release layer access opening **358** or etchant entrance opening. In some embodiments, the etch may have an etch rate that depends on the composition of the at least one component that is graded across the thickness of the graded composition release layer. The illustration shows a suitable point for stopping the etch. Examples of suitable types of etches include, but are not limited to, an etch with hydrochloric acid and phosphoric acid ($HCl:H_3PO_4$), an etch with phosphoric acid, hydrogen peroxide, and water (H_3PO_4:H_2O_2:H_2O), and others known in the arts.

[0057] In embodiments, the etch may etch or form a protuberance **320** of the graded composition release layer between the group III-V device and the substrate. The protuberance provides a non-flat surface **321** (e.g., non-coplanar, curved, rounded, etc.) between the group III-V device and the substrate. In the illustrated embodiment, the protuberance has a generally hemispherical shape, although the scope of the invention is not so limited. Any of the otherwise shaped protuberances disclosed elsewhere herein e.g., truncated conical shapes, hill shapes, mound shapes, mesa shaped, irregular shaped, etc.) may be used instead. Etch openings **322** have been etched or defined between the protuberance and the group III-V device where portions of the graded composition release layer have been etched away or removed while etching the protuberance. One significant advantage of the protuberance and/or the non-flat surface between the group III-V device and the substrate is that they may help to limit or reduce contact areas between the group III-V device and other nearby surfaces. This in turn may help to limit or reduce stiction and/or other generally undesired attractive forces between the group III-V device and these surfaces. Even if the group III-V device falls, it should generally only contact the top or apex of the protuberance along a relatively small surface area.

[0058] In some embodiments, the etch may continue on the graded composition release layer until the group III-V device **316**G is at least substantially released from the substrate **311**.